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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/783,518	02/21/2001	Hiroyuki Imai	203340US3X	2106

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EXAMINER

TSANG FOSTER, SUSY N

ART UNIT PAPER NUMBER

1745

DATE MAILED: 01/29/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

029

Office Action Summary

Application No.

09/783,518

Applicant(s)

IMAI ET AL.

Examiner

Susy N Tsang-Foster

Art Unit

1745

-- **Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --**
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 6-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 16, 17 and 19 is/are rejected.
- 7) ☒ Claim(s) 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I, Claims 1-5 and 16-19 in Paper No. 7 is acknowledged. The traversal is on the ground(s) that in the present application, any search of the elected method claims would also include the classes and subclasses appropriate for searching the product and apparatus claims and therefore there would be no undue burden if all the claims were examined together. However, it is noted that applicants elected Group I which is drawn to the product claims and not to the method claims. Nevertheless, applicants' reason for the traversal is not found persuasive because for related but distinct inventions, undue burden exists if one or more of the following can be shown: (a) separate classification; (b) separate status in the art if the inventions are classifiable together; or (c) a different field of search is shown even if the inventions are classifiable together. See MPEP 808.02. The Examiner has indicated in the previous restriction requirement that the inventions of Group I and Group II are classified in different classes (satisfying requirement a) and hence the Examiner has shown that undue burden exists for restricting between Group I and Group II. After further consideration by the Examiner, the election of species requirement made in the written restriction requirement (see paper #6, paragraph 4) is withdrawn even though applicants did not make an election of species.

The restriction requirement is still deemed proper and is therefore made FINAL.

2. Claims 6-15 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Applicant timely traversed the restriction (election) requirement in Paper No. 7.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

4. The corrected or substitute drawings were received on 9/18/2001. These drawings are approved by the Examiner.

Specification

5. The incorporation of essential material in the specification by reference to a foreign application or patent, or to a publication is improper. Applicant is required to amend the disclosure to include the material incorporated by reference. The amendment must be accompanied by an affidavit or declaration executed by the applicant, or a practitioner representing the applicant, stating that the amendatory material consists of the same material incorporated by reference in the referencing application. See *In re Hawkins*, 486 F.2d 569, 179 USPQ 157 (CCPA 1973); *In re Hawkins*, 486 F.2d 579, 179 USPQ 163 (CCPA 1973); and *In re Hawkins*, 486 F.2d 577, 179 USPQ 167 (CCPA 1973).

It is recommended to the applicants to rewrite the cross-related reference to related applications section as “The present application claims foreign priority to Japanese Application 2000-043017, filed on February 21, 2000 and to Japanese Application 22001-002728 filed on January 10, 2001.”

6. The disclosure is objected to because of the following informalities:

On page 5, line 20, “banded” should be “bonded”.

On page 8, line 27, the range of 120 °C to 1400 C appears to contradict the specification which states the pyrolysis of the fiber is to be avoided and temperatures above 1000 °C would pyrolyze the fiber. It appears to be a typographical error and that applicants intended to write 120 °C to 140 °C as supported by paragraph 17 of the Japanese priority document 2000-043017.

On page 9, line 22, “20, 35 weight%” is unclear and should be “20-35 weight %” as supported by page 5, line 22 of the specification.

On page 21, the Table should be labeled as “Table 2 continued”.

Table 3 appears to be missing from the specification.

Appropriate correction is required.

Duplicate Claims

7. Claim 19 is objected to because of the following informalities: It appears that claim 19 contains the same limitations as claim 5.

Applicant is advised that should claim 5 be found allowable, claim 19 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Appropriate correction is required.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 4-36958 A (Derwent abstract).

It is noted a preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). The intended use of the collector for an alkaline secondary battery is not given patentable weight.

The product-by-process limitations of claims 1- 5 are not given patentable weight since the courts have held that patentability is based on a product itself, even if the prior art product is made by a different process (see *In re Thorpe*, 227 USPQ 964, (CAFC 1985), *In re Brown*, 173 USPQ 685 (CCPA 1972), and *In re Marosi*, 218 USPQ 289, 292-293 (CAFC 1983)).

Specifically, the limitations “hydrophilized by one of sulfonation, gaseous fluorine treatment, and vinyl monomer grafting”, and “produced by a wet process” are not given patentable weight.

The Derwent abstract for JP4-36958 A discloses a metal plated fabric obtained by coating a nonwoven fabric based on a composite fiber of up to 6 denier microfilaments with a spiral micro-crimp that is fixed with a 5 wt% heat fusible binder fiber. An acrylic resin was added to the fabric and heat treated for 3 minutes at 150 °C and Ni was plated by electroless plating. The metal plated fabric can function as a collector.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1, 2, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stepanov et al. (US 6,063,143) in view of JP 58-196238 A (Derwent abstract).

It is noted a preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). The intended use of the collector for an alkaline secondary battery is not given patentable weight.

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The product-by-process limitations of claims 1, 2, and 5 are not given patentable weight since the courts have held that patentability is based on a product itself, even if the prior art product is made by a different process (see In re Thorpe, 227 USPQ 964, (CAFC 1985), In re Brown, 173 USPQ 685 (CCPA 1972), and In re Marosi, 218 USPQ 289, 292-293 (CAFC 1983)).

Specifically, the limitations “hydrophilized by one of sulfonation, gaseous fluorine treatment, and vinyl monomer grafting”, and “produced by a wet process” are not given patentable weight.

Stepanov et al. disclose nickel coating a nonwoven fabric (unwoven needle-pierced felt) based on radiation-grafted polypropylene having an ion-exchange capacity with respect to nickel and the felt has a porosity of 87% (col. 2, lines 8-35). The nickel coated unwoven felt can be used as a current collector (electrode substrate) in storage batteries on which active material is deposited (col. 1, lines 15-21). Since the nonwoven fabric has a porosity of 87%, there is inherently a plurality of micropores extending from one surface to another surface thereof.

Stepanov et al. does not disclose the grafted monomer providing the ion-exchange capacity.

JP 58-196238 teaches radiation grafting acrylic acid on a plastic substrate made of polypropylene in order to produce a uniform and strongly adhesive plating between the metal and the surface of the plastic substrate (see Derwent abstract).

Stepanov et al. and JP 58-196238 are analogous are because they are both concerned with electroless plating of a plastic substrate.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to graft acrylic acid onto polypropylene to result in a radiation grafted polypropylene that is inherently hydrophilic and has improved adhesion properties to the nickel plated film on the nonwoven fabric.

12. Claims 16, 17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stepanov et al. (US 6,063,143) in view of JP 58-196238 A (see Derwent abstract) as applied to claims 1, 2, and 5 above, and further in view of Hasebe et al. (US 5,708,349).

The product-by-process limitations of claims 16, 17, and 19 are not given patentable weight since the courts have held that patentability is based on a product itself, even if the prior art product is made by a different process (see In re Thorpe, 227 USPQ 964, (CAFC 1985), In re Brown, 173 USPQ 685 (CCPA 1972), and In re Marosi, 218 USPQ 289, 292-293 (CAFC 1983)).

Specifically, the limitations “hydrophilized by one of sulfonation, gaseous fluorine treatment, and vinyl monomer grafting”, and “produced by a wet process” are not given patentable weight.

Stepanov et al. in combination with JP 58-196238 A teach all the limitations of claims 16, 17, and 19 (see above) except that the storage battery is an alkaline secondary battery.

Hasabe et al. teach that a nickel plated nonwoven fabric can be used as a 3-dimensional current collector in an alkaline secondary battery (col. 6, lines 24-29 and abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a nickel plated nonwoven fabric as a collector in an alkaline secondary battery because the nickel plated nonwoven fabric is inherently three dimensional and as a result has a large surface area for holding an increased amount of active material needed to meet the capacity requirements of a battery for portable electronic devices.

Allowable Subject Matter

13. Claim 18 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

14. The following is a statement of reasons for the indication of allowable subject matter:

The present invention claims an alkaline secondary battery comprising a collector that includes a nonwoven fabric that has been plated with a nickel film and the nonwoven fabric includes crimped fibers.

The closest prior art of record Hasebe et al. (US 5,708,349) disclose an alkaline secondary battery comprising a collector that includes a nonwoven fabric that has been plated with a nickel film but does not disclose, teach, or suggest that the nonwoven fabric includes crimped fibers.

Conclusion

15. Any inquiry concerning this communication or earlier communications should be directed to examiner Susy Tsang-Foster, Ph.D. whose telephone number is (703) 305-0588. The examiner can normally be reached on Monday through Thursday from 9:30 AM to 8:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached at (703) 308-2383. The phone number for the organization where this application or proceeding is assigned is (703) 305-5900.

The fax phone numbers for the organization where this application or proceeding is assigned is (703) 872-9310 for regular communications and (703) 872-9311 for After-Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

st/20 January 2003

Susy Tsang-Foster